

METHOD OF OPERATION  
TRUNK CIRCUIT

Tie Line From Desks - For Use Where Zero Operator's Trunk - Has a 34 Ohm Sleeve -  
"A" Position Switchboard - Full Mechanical Power Driven System.

GENERAL DESCRIPTION

1. This circuit is one end of a two-way trunk between a zero operator's position and a desk in the same office. It is used with zero operator's common battery cord circuits whose sleeves are connected to battery through a maximum resistance of 129 ohms. It terminates at the desk end in a similar circuit, only key ended instead of jack ended. An outgoing call is made by the insertion of the calling plug of a common battery, or full universal cord circuit in the jack of an outgoing trunk at the zero operator's position lighting a lamp at the desk.

2. An incoming call is made by the operation of a tie line key at the desk to the "talk" position lighting a lamp at the zero operator's position. The call is answered by the insertion of the plug of the common battery, or full universal answering cord in a jack associated with the lamp extinguishing it and connecting the zero operator's telephone set to the tip and ring of the line.

3. The circuit is restored to normal by the release of the tie line key at the desk and the withdrawal of the plug of the cord at the zero operator's position.

DETAILED DESCRIPTION .

OPERATION

OUTGOING CALL TO DESK

4. The insertion of the plug of the calling cord of a common battery or full universal cord circuit in a multiple jack of an outgoing trunk at the zero operator's position operates the S relay. The S relay operated, operates the S-1 relay. The S-1 relay operated connects battery through its 500 ohm winding to lead S operating a relay in the tie line circuit at the desk, lighting a lamp. The call is answered at the desk by the operation of a tie line key to the "talk" position extinguishing the desk lamp, holding the S-1 relay operated and connecting the telephone set at the desk across the line.

INCOMING FROM DESK

5. A call incoming to the zero operator's position is made by the operation of the tie line key at the desk operating the L relay through the break contact of the S-1 relay over lead S. The L relay operated lights the lamp. The insertion of the plug of a common battery or full universal answering cord circuit in the answering jack associated with a lighted lamp operates the S relay. The S relay operated operates the S-1 relay. The S-1 relay operated releases the L relay extinguishing the lamp.

## DISCONNECT

6. The withdrawal of the plug of the calling cord from the jack of an outgoing trunk or the answering jack releases the S relay. The S-1 relay is held operated at this time under control of the tie line key at the desk thus preventing a false calling lamp signal at the desk. The release of the tie line key at the desk releases the S-1 relay restoring the circuit to normal.

7. In case the tie line key at the desk is released with the plug of the cord inserted in the answering or multiple jack the S-1 relay remains operated under control of the S relay preventing a false calling lamp signal at the zero operator's position on disconnect.

CIRCUIT REQUIREMENTS

OPERATE

NON-OPERATE

RELEASE

E41      Test .084 amp.  
(S)      Readj. .044 amp.

E380      Test .0097 amp.  
(L)      Readj. .009 amp.

E381      Test .018 amp.  
(F-1)      Readj. .011 amp.  
Inner  
(500)

Test .0066 amp.  
Readj. .007 amp.

Test .009 amp.  
Readj. .018 amp.

Test .0005 amp.  
Readj. .001 amp.